

Amendments to the Specification:

Please amend paragraph [0087] beginning at page 34, line 6 with the following amended paragraph:

[0087] In implementing the above and other display designs, there can be a vertical misalignment between the multiple segments comprising the full screen. This misalignment can be digitally corrected with a means similar to that of the horizontal correction. Each segment of the screen can be driven with a scan engine capable of generating more horizontal lines than actually required for display in that segment (e.g., 4 extra lines). In a perfectly aligned situation, the scanning of the system can be configured to have an equal number of extra (unused) lines above and below the segment image. If vertical misalignment exists, the control electronics may shift the segment image upwards or downwards by utilizing these extra lines in place of the normal lines. For example, if the image needs to be moved upwards one line, the controller moves each line upwards to the previous one, utilizing one of the extra lines above the normal image and adding an extra unused line at the bottom. If this adjustment is desired to take place automatically during startup or normal operation, a sensor is

required to provide feedback in real time. Such a sensor could be a position sensing diode located to either side of the viewable area of the segment to be controlled. ~~The line would over scan onto this sensor when required.~~ If desired, the line scans over the sensor. Alternatively, a beam splitter may be used to provide feedback ~~during the viewable portion of the scan while scanning the viewable area of the segment.~~

Please amend paragraph [00245] beginning at page 110, line 1 with the following amended paragraph:

[00245] The following sections and FIGS. 48, 49A, 49B and 50 describe beam pointing designs that use a vertical beam control actuator at the laser to control the pointing of the beam while the galvo mirror near the polygon is used to control the vertical beam scanning. This vertical beam control actuator allows software control of the static and dynamic beam pointing for each laser ~~(static) and control of beam pointing for each laser.~~ Although the examples described below are for systems with phosphor screens, the techniques can be used in other display systems using similarly beam scanning techniques.

Please amend paragraph [00249] beginning at page 111, line 26 with the following amended paragraph:

[00249] FIG. 49B shows a design that combines the designs in FIGS. 48 and 49A by using an actuator to provide both a displacement along the vertical direction and a rotation of the laser assembly with the laser and the collimating lens. The tilting and vertical displacement of the collimated laser diode assembly can be used to change the vertical beam pointing and the vertical displacement on the screen. The vertical displacement on the screen is set to have a resolution much less than the width of one horizontal scanning line by the proper design and control ~~[[fo]]~~ of the position and rotation actuator. The vertical displacement is used with the ~~rotation~~ tilt thereof to create a virtual pivot at or near the polygon facet.

Please amend paragraph [00250] beginning at page 112, line 5 with the following amended paragraph:

[00250] FIG. 50 shows yet another design that tilts or rotates the laser assembly with the laser and the collimating lens in a spherical bearing to change the vertical beam pointing on the screen, resulting in a vertical displacement of the beam on the screen. The vertical displacement on the screen is controlled to have a resolution much less than the width of one horizontal scanning line. The spherical bearing can be designed to have a

radius equal to the distance from a plane of the spherical bearing to the polygon facet, resulting in a rotation about the polygon facet. Other mechanism (e.g. linkage) may be used to simulate the spherical bearing motion path.